



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,450	12/11/2000	Jacob M. McGuire	112025-0460	4360

7590

06/02/2005

A. Sidney Johnston
Cesari and McKenna, LLP
88 Black Falcon Avenue
Boston, MA 02210

EXAMINER

STRANGE, AARON N

ART UNIT

PAPER NUMBER

2153

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/734,450		MCGUIRE, JACOB M.	
	Examiner		Art Unit	
	Aaron Strange		2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 22 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,9-13,15-21, and 23 is/are rejected.
- 7) ☒ Claim(s) 2,8,14 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>03222005</u> . | 6) <input type="checkbox"/> Other: _____ |

He

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 3/22/2005 have been fully considered but they are not persuasive.
2. With regard to claims 1, 7, and 13 and Applicant's assertion that He does not disclose "selecting the control block associated with the least number of connections; and selecting the server pointed to by the control block." (Page 16, Lines 1-3 of Remarks), the Examiner respectfully disagrees. As discussed in the Office action of 12/22/2004, He discloses selecting the control block associated with the least number of connections (Col 4, Lines 44-46) and selecting the server pointed to by the control block (Col 4, Lines 41-44).
3. With regard to Applicant's assertion that "He does not address the use of control blocks" (Page 16, Line 18 of Remarks), the Examiner respectfully disagrees. He teaches the use of control blocks and that each control block is associated with a number of active connections the server is connected with (Col 4, Lines 25-33), as claimed by Applicant. Applicant's assertion that each time the system in He receives a client request "a load balancing server must examine the network load measurements obtained from the servers to select the most optimal server" (Page 16, Lines 20-22) is incorrect. He clearly discloses that the appropriate server is selected from the group of

servers (Col 4, Lines 50-61), which have previously been ranked in order (Col 4, Lines 38-49) when a client request is received.

Furthermore, even if He did examine the load measurements for every request, the claims do not preclude such an examination from occurring. The claims only require selecting the control block associated with the least number of connections and selecting the server pointed to by the control block. No limitations currently present in the claims preclude examining the load of a server. In fact, the second clause of claim 1 requires examining the number of connections on the servers in order for them to be associated with the correct control blocks. Such an operation would require the number of connections to be updated each time a new connection is made to that server.

4. Applicant's has failed to present any additional arguments with respect to claims 2-6, 8-12, and 14-18 except that they are allowable for the same reasons as claims 1,7, and 13, from which they depend. Therefore, Applicant's arguments with respect to those claims are not persuasive for the reasons presented above.

5. Applicant has failed to point out the patentable novelty of newly submitted claims 19-23. However, due to their similarity to claims 1-6, they have been treated under the same rationale as claims 1-6, and are rejected below.

Claim Rejections - 35 USC § 112

6. With regard to claims 1,7, and 13, Applicant's arguments and evidence are persuasive, and the 112 2nd Paragraph rejections of those claims are hereby withdrawn. The claims will be interpreted in accordance with the "broadest reasonable interpretation consistent with the specification" standard (See MPEP 904.01).

7. With regard to claims 2,8, and 14, Applicant's arguments and evidence are persuasive, and the 112 2nd Paragraph rejections of those claims are hereby withdrawn.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

9. Claims 1, 7, 13, 19, 20, 21 and 23 are rejected under 35 U.S.C. 102(a) as being anticipated by He et al. (6,671,259).

10. In referring to claims 1,7,13,19,21, and 23, He shows a load balancing method used for reducing server congestion and distributing client request's to different servers by selecting the optimal server. A load-balancing server selects on server out of subset of a plurality of servers based on a predetermined criteria such as load level (see

summary, col.2). He further identifies these subsets or categories to be characterized by network load measurements, including number of active connections (col. 4 lines 25-41). He shows the following:

- providing a plurality of control blocks (high load, low load categories), each control block associated with a number of active connections a server is connected with, the control block configured to control at least one server with the associated number of connections in a server list (col. 4 lines 25-33);
- causing each control block to point to a server (18a) with a least value ascertained by determining the number of connections on the server relative to the server's capacity to handle connections (col. 4 lines 5-24 and 34-41);
- selecting the control block associated with the least number of connections (col. 4 lines 44-46); and
- selecting the server pointed to by the control block (col. 4 lines 41-44).

11. In referring to claim 20, He shows the following:

- associating each of a plurality of servers with one of one or more control blocks (high load, low load categories), each control block representing a number of connections of the associated servers (col. 4 lines 25-33);
- pointing, within each control block, to a server with a least value, the value based on the number of connections on the server relative to an assigned weight of each server; (col. 4 lines 5-24 and 34-41) (NOTE: the assigned weight has been treated

as being the same as the server capacity, consistent with the specification at Page 3, Lines 2-3);

- selecting the control block associated with the least number of connections (col. 4 lines 44-46); and
- selecting the server pointed to by the control block (col. 4 lines 41-44).

12. In referring to claim 21, He further discloses that the assigned weight represents a server's capacity to handle connections (col. 4 lines 5-24 and 34-41).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 3, 5, 9, 11, 15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over He et al. (6,671,259) in view of Yu et al. (US 6,298,371)

15. In referring to claims 3, 9, and 15, He shows method for causing the control block with the server having an added/removed connection to transfer the server to an adjacent control block, wherein the adjacent control block is associated with the number of connections pertaining to the transferring server (col. 8 lines 28-44); causing the

control block to transfer the metric of the server to the adjacent control block (col. 7 lines 60- col. 8 line 3); and updating the pointer to point to the next server on the list of the control block (col. 8 lines 28-44).

16. In referring to claims 5, 11, and 17, He shows method for causing the adjacent control block to receive the transferring server (col. 8 lines 28-44); causing the adjacent control block to receive the metric of the transferring server (col. 7 lines 60- col. 8 line 3); causing the adjacent control block to update and sort the server list (col. 8 lines 28-44).

17. Claims 4, 6, 10, 12, 16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over He et al. (6,671,259) in view of Yu et al. (US 6,298,371) in view of Ernst (US 6,298,371).

18. In referring to claims 4, 10, and 16, although the combined teachings of He and Yu show substantial features of the claimed invention, as discussed above, it fails to disclose removing the control block. Nonetheless, this feature is well known in the art and would have been an obvious modification to He and Yu as evidenced by Ernst.

In an analogous art, Ernst shows a method for generating and deleting control blocks as needed in order to improve resource availability. Ernst shows a DELETE CONTROL BLOCK operation for buffer control block when it is not being utilized (col. 7 lines 54-60).

Given this feature, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system shown by He and Yu to employ the feature shown by Ernst, in order to maximize memory utilization.

19. In referring to claims 6, 12, and 18, Ernst shows adding a control block if there is no control block associated with server transmissions (col. 6 lines 47-59).

Allowable Subject Matter

20. Claims 2,8,14, and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

21. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2153

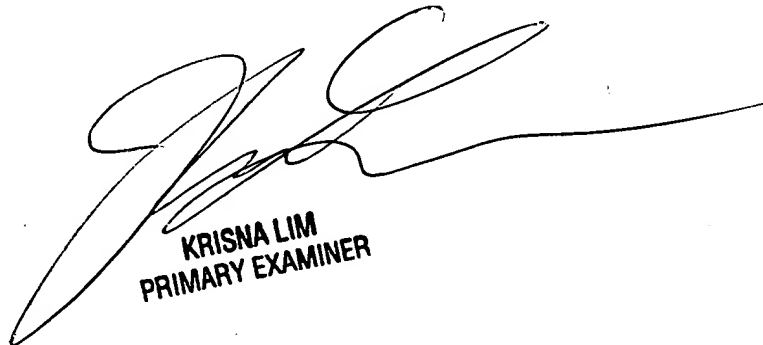
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron Strange whose telephone number is 571-272-3959. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AS
5/27/2005



KRISNA LIM
PRIMARY EXAMINER